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SNOW SURVEYS AND IRRIGATION WATER FORECASTS

FOR

MISSOURI AND ARKANSAS RIVER BASINS.

March 1, 1937

The following data pertaining to snow surveys and irrigation water-supply forecasts are provided by Bureau of Agricultural Engineering of the U. S. Department of Agriculture, in cooperation with State departments, other Federal bureaus and local organizations. 1/

Status of precipitation as of October 1 to March 1: Central Montana reports precipitation to be 87 percent normal; Western Montana, 82 percent normal. Twenty-one precipitation stations 6,000 feet or more in elevation east of the divide in Wyoming show precipitation 81 percent normal. Precipitation in the South Platte River Basin is less than normal. Seven precipitation stations 6,000 feet or more in elevation in the Arkansas River Basin show precipitation 84 percent normal.

In the Laramie River Basin the snow has a good density, but on the average is less in depth than last year at this time. For the North Platte in Wyoming, the snow cover is about 80 percent of normal. The snow conditions in the Big Horn Mountains in Wyoming have improved during the past month but are still deficient.

For Colorado, in the South Platte drainage, the snow cover is generally light. In the Poudre, Big Thompson and Upper South Platte in South Park, the snow is about 50 percent normal. In North Park, North Platte drainage, the snowfall is light. For the Upper Arkansas River drainage, the snow cover is about 60 percent in comparison with that of last year at this time.

Reservoir storage in northern Wyoming is normal, but in the central and southern part of the state it is below normal. Soil moisture is deficient in most sections of Wyoming. Storage on the South Platte in Colorado is normal except on the tributaries in the northern part of the State. Storage on the Arkansas is below normal. The moisture content of the soil is fair in the upper Arkansas Basin but deficient in the lower valley.

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U. S. Department of Agriculture
Washington, D. C.

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Bureau of Agricultural Engineering, U. S. Dept. Agr.; Forest Service; Colo. Agri. Expt. Station
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*Observations made February 16.

Tributary Basins (Primary & Secondary & Snow Courses)	State	Sec.	Location Tp. Range	Elev.	Snow Cover Measurements		
					Average Snow Depth : (Inches) :	Average Snow Depth : (Inches) :	Average Water Depth : (Inches) :

MISSOURI RIVER
(Between Helena & Great Falls)

Tennile Creek

Chessman Reservoir	Mont.	2	8N 5W	6200	21.4	13.2	5.7	3.8
Tennile Creek, Lower	Mont.	13	8N 6W	6250	26.3	20.8	6.0	5.0
Tennile Creek, Middle	Mont.	13	8N 6W	7000	37.5	28.1	9.1	6.7
Tennile Creek, Upper	Mont.	19	8N 5W	8000	40.6	33.0	10.4	8.5

Little Prickley Pear Creek

Stemple Pass	Mont.	16	13N 7W	6900	33.3	37.2	7.2	9.5
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Smith Creek

Kings Hill	Mont.	35	13N 7E	7800	40.1	48.4	8.4	12.6
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Sun River

Goat Mountain	Mont.		Lat. 47°31', Long. 112°55'	7000	32.8	31.7	8.2	7.7
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MARIAS RIVER

Desert Mountain 2/	Mont.	24	31N 19W	5600	50.7	--	15.3	--
Marias Pass	Mont.		Lat. 48°19', Long. 113°21'	5200	52.0	51.1	16.0	14.4

MILK RIVER

Grace Lake 2/	Mont.	14	35N 19W	4500	51.7	--	14.8	--
Kintla Creek No. 4 2/	Mont.	6	37N 21W	4300	35.3	--	10.7	--

Tributary Basins (Primary & Secondary & Snow Courses)	State	Sec	Location Twp.	Range	Elev.	Snow Cover Measurements		
						Average Snow Depth : (Inches) :	Average Snow Depth : (Inches) :	Average Water Depth : (Inches) :

YELLOWSTONE RIVER

Headwaters of Yellowstone River

Camp Senia	Mont.	2	8S	18E	7870	17.6	--	3.9
Cooke City	Mont.	25	9S	14E	7400	28.0	--	6.4
Lake Camp	Wyo.	Lat. 44° 34', Long. 110° 24'			7850	35.9	--	6.5

Shoshone River

Brooks Lake No. 2	Wyo.	23	44N	110W	9200	44.5	--	11.9
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Big Horn River

Brooks Lake No. 2	Wyo.	23	44N	110W	9200	44.5	--	11.9
Ranger Creek	Wyo.	32	53N	88W	8800	39.7	--	5.7
Roaring Fork	Wyo.	7	31N	101W	10200	13.5	--	4.1
Shell Creek R. Sta.	Wyo.	19	53N	88W	7700	30.0	--	3.7
Sheridan Creek R. Sta.	Wyo.	3	42N	109W	7500	19.3	--	3.2
Whortan Meadow	Wyo.	18	31N	101W	9200	12.0	--	3.0

Powder River

Red Fork	Wyo.	18	43N	85W	7500	40.8	--	9.7
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Tributary Basins (Primary & Secondary & Snow Courses)	:	:	:	:	:	:	:	:	Snow Cover Measurements		
									Average	Snow Depth	Average
											Water Depth
									Mar. 1, 1937: Mar. 1, 1936	(Inches)	(Inches)

NORTH PLATTE RIVER
Headwaters North Platte

Big Creek Lake	Colo.	9	11N	82W	9000	42.6	--	9.9	--	--	--
Bottle Creek	Wyo.	24	14N	85W	8200	--	--	--	--	--	--
Columbine	Colo.	21	5N	82W	9300	59.5	86.4	15.0	--	29.0	--
Headquarters Park	Wyo.	27	16N	80W	10100	--	--	--	--	--	--
North Barrett Creek	Wyo.	27	16N	81W	9400	46.3	--	11.9	--	--	--
Old Battle	Wyo.	25	14N	85W	9800	98.0	--	30.1	--	--	--
Park View	Colo.	24	5N	78W	9200	27.6	43.0	8.7	--	9.7	--
Ryan Park	Wyo.	30	16N	80W	8400	27.5	--	6.9	--	--	--
Webber Springs	Wyo.	27	14N	85W	9000	--	--	--	--	--	--
West Portal Greeley-											
Poudre Tunnel	Colo.	7	8N	75W	8600	25.4	--	5.9	--	--	--

Sweetwater River

Grannier Meadows	Wyo.	19	30N	100W	9000	40.8	--	9.7	--	--	--
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Laramie River

Brooklyn Lake	Wyo.	11	16N	79W	10200	58.0	--	18.2	--	--	--
Fox Park	Wyo.	21	13N	78W	9200	22.8	--	5.2	--	--	--
Hairpin Turn	Wyo.	24	16N	79W	9000	--	--	--	--	--	--
Libby Lodge	Wyo.	29	16N	78W	8800	--	--	--	--	--	--
Pole Mountain	Wyo.	35	15N	72W	8700	8.6	--	1.4	--	--	--

Tributary Basins (Primary & Secondary & Snow Courses)	State	Sec.	Loc.	Twp.	Range	Long.	Elev.	Snow Cover Measurements		
								Average		Water Depth
								Snow Depth	(Inches)	
								Mar. 1, 1937	Mar. 1, 1936	Mar. 1, 1937
								(Inches)	(Inches)	(Inches)

SOUTH PLATTE RIVER

Big South	Colo.	33	8N	75W			8600	---	---	---
Cameron Pass	Colo.	2	6N	76W			10285	41.2	12.4	---
Chambers Lake	Colo.	6	7N	75W			9000	12.6	3.4	---
Deadman Hill	Colo.	26	10N	75W			10950	40.1	9.7	---
East Portal Moffat Tunnel	Colo.	2	2S	74W			9400	4.3	0.7	---
Fairplay	Colo.	33	9S	77W			10000	---	---	---
Hidden Valley	Colo.	24	5N	74W			9000	6.6	2.4	---
Hoosier Pass	Colo.	13	8S	78W			11400	25.4	4.8	---
Jefferson Creek	Colo.	23	7S	76W			10050	4.6	0.8	---
Loveland Pass	Colo.	27	4S	76W			10100	33.1	7.8	---
Pole Mountain	Wyo.	35	15N	72W			8700	8.6	1.4	---
University Camp	Colo.	28	1W	73W			10000	0.0	0.0	---
Wild Basin	Colo.	24	3N	74W			10000	31.2	7.6	---

ARKANSAS RIVER

Four Mile Park	Colo.	23	11S	81W			9700	5.6	1.4	---
Fremont Pass	Colo.	2	8S	79W			11300	42.8	10.8	15.6
LaVeta Pass	Colo.	23	23S	70W			10504	25.5	5.7	---
Marshall Creek	Colo.	24	48N	6E			10846	40.6	5.5	19.1
Poncha Creek	Colo.	19	48N	7E			10500	22.1	7.0	12.5
Tennessee Pass	Colo.	21	8S	80W			10200	24.8	6.6	11.8
Twin Lakes Tunnel	Colo.	22	11S	82W			10125	---	---	---
Whiskey Creek	Colo.	31	32N	67W			10250	26.2	7.5	---

1/ The snow measurements are made principally by field personnel of the following Federal Government organizations: Forest Service, National Park Service, Geological Survey, Bureau of Reclamation; and Montana Agricultural Experiment Station. This work is otherwise conducted cooperatively with the War Department, the State Engineers of Wyoming and Colorado, U. S. Weather Bureau, U. S. Geological Survey, Montana and Colorado Agricultural Experiment Stations, and various municipalities, irrigation associations, power companies, and others.

2/ In adjacent drainage. 3/ Common to two drainages.

